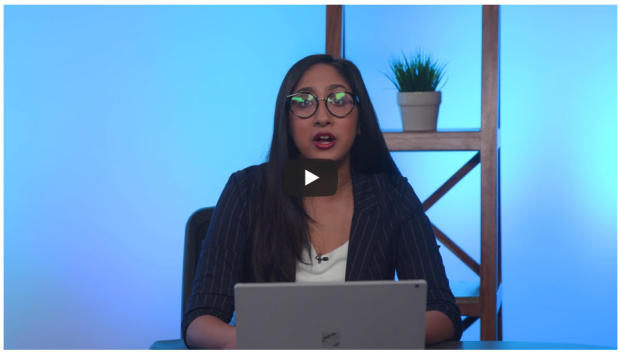
Clustering

On this page, we'll discuss the unsupervised approach of *clustering* in more detail.

> *As the name suggests, **clustering** is the problem of organizing entities from the input data into a finite number of subsets or clusters; the goal is to maximize both intra-cluster similarity and inter-cluster differences.*

Clustering Algorithms



K-Means Clustering

QUESTION 1 OF 2

Here are the main types of clustering algorithms we just discussed. Can you match each one with its description?

Submit to check your answer choices!

DESCRIPTION	TYPE OF CLUSTERING
Groups members based on how closely they are packed together; can learn clusters of arbitrary shape.	Density-based clustering
Builds a tree of clusters.	Hierarchical clustering
Groups members based on their distance from the center of the cluster.	Centroid-based clustering
Groups members based on the probability of a member belonging to a particular distribution.	Distribution-based clustering

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QUESTION 2 OF 2

Which of the following statements are true about the K-means clustering algorithm?

(Select all that apply.)

- [x] K-Means is a centroid-based, unsupervised clustering algorithm.
- [ ] K-Means is a density-based, unsupervised clustering algorithm.
- [x] It creates up to a target (K) number of clusters and groups similar members together in a cluster.
- [ ] The objective is to maximize intra-cluster distances

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